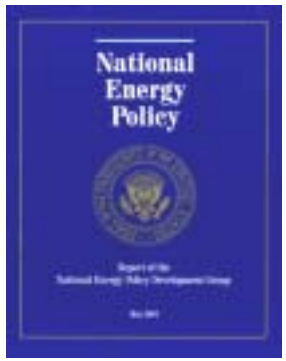
BLM'S Renewable Energy Assessment and Wind Energy Development Policy

Lee Otteni

Bureau of Land Management

Washington DC

Renewable Energy Initiative



- President's National Energy Policy – **May 2001**
- BLM Energy Policy Implementation Plan – **August 2001**
- DOI Renewable Energy Conference – **November 2001**
- BLM Renewable Energy Summit – **February 2002**
- Western Governor's Environmental Summit – **April 2002**
- White House Report on Renewable Energy – **August 2002**
- BLM Wind Energy Policy – **October 2002**

Renewable Energy Opportunities

- Significant Potential on BLM Lands
- Federal Tax Credit
- State-level Tax Credits
- Renewable Energy Portfolio Standard

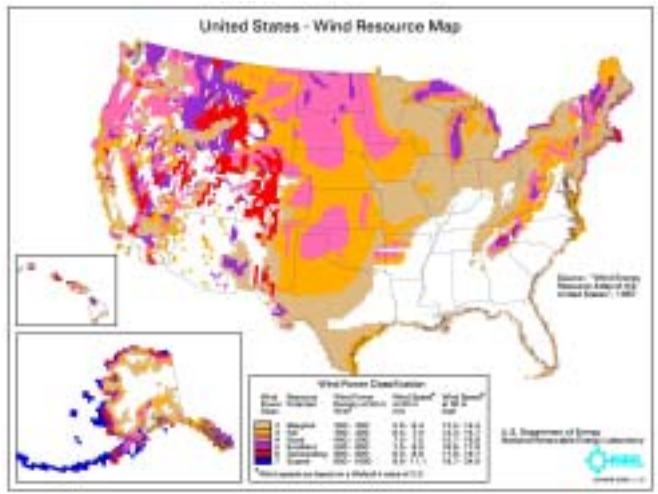
BLM Activity

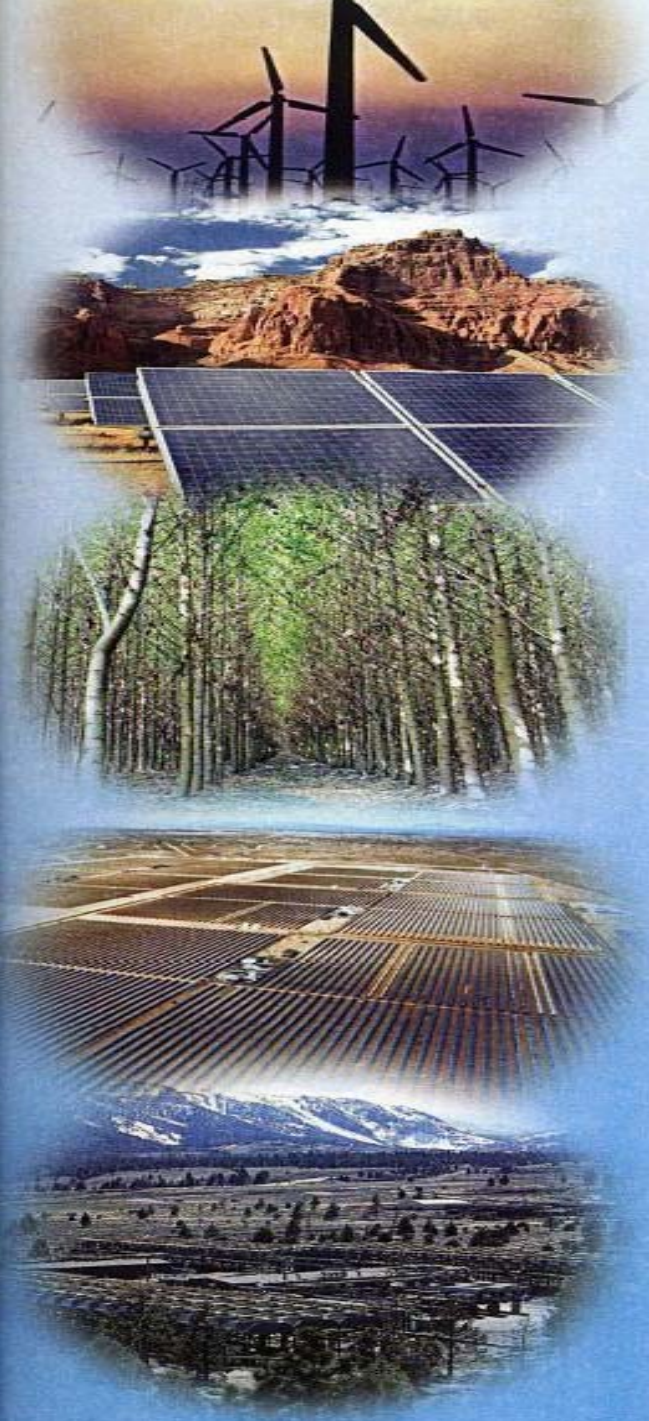
Current Authorizations (30)

- California, Wyoming, Nevada, Idaho, Oregon, Washington,

BLM Inventory and Planning

- General Policy to Encourage Development of Renewable Energy in Acceptable Areas
- When Land Use Plans Are Revised There Is Benefit to Address Renewable Resource Potential
- BLM and NREL Assessed Renewable Energy on Public Lands (Feb 2003)



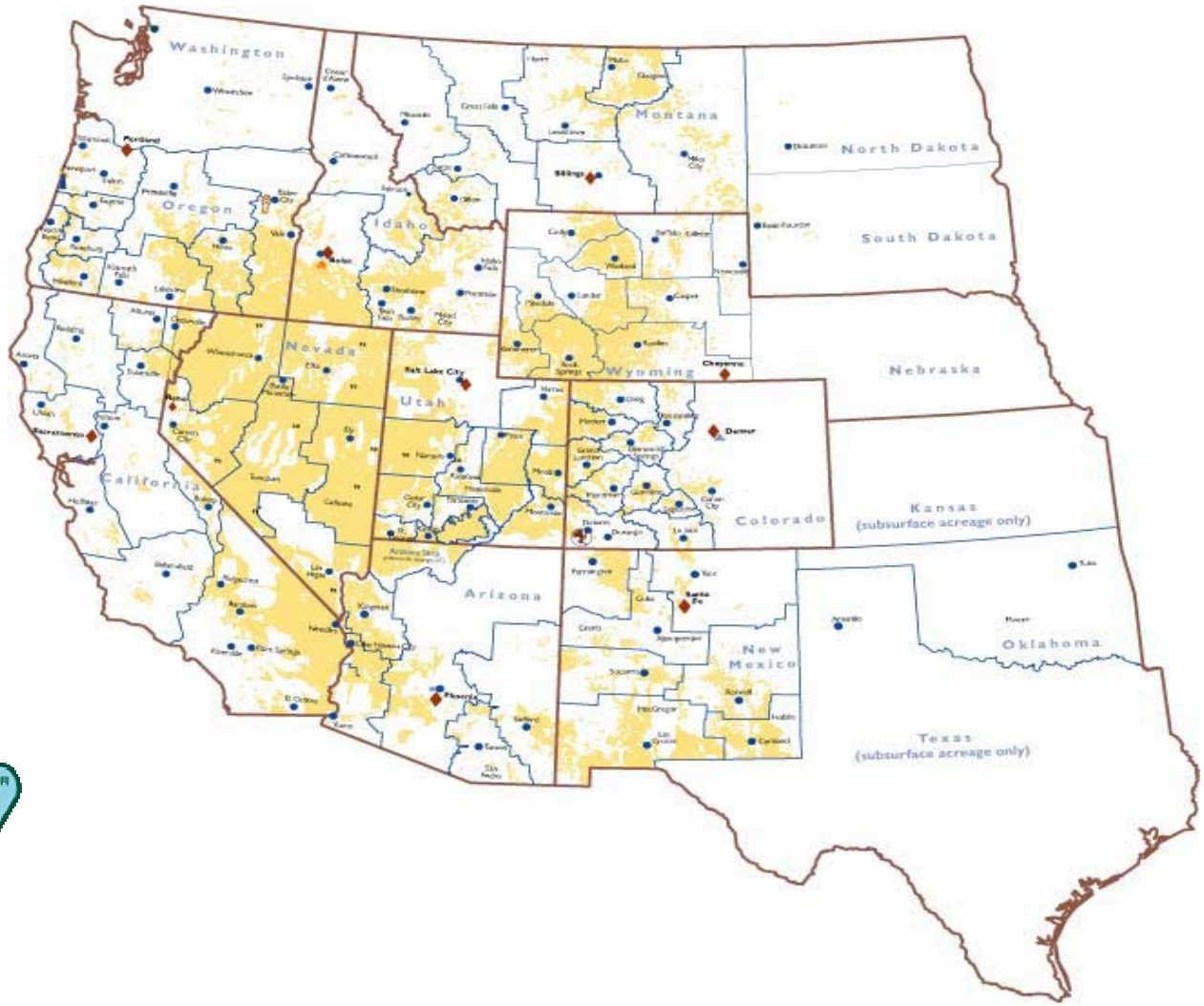


Bureau of Land Management

Assessing The Potential For Renewable Energy On Public Lands

November 2002

BLM Lands



U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

The Process

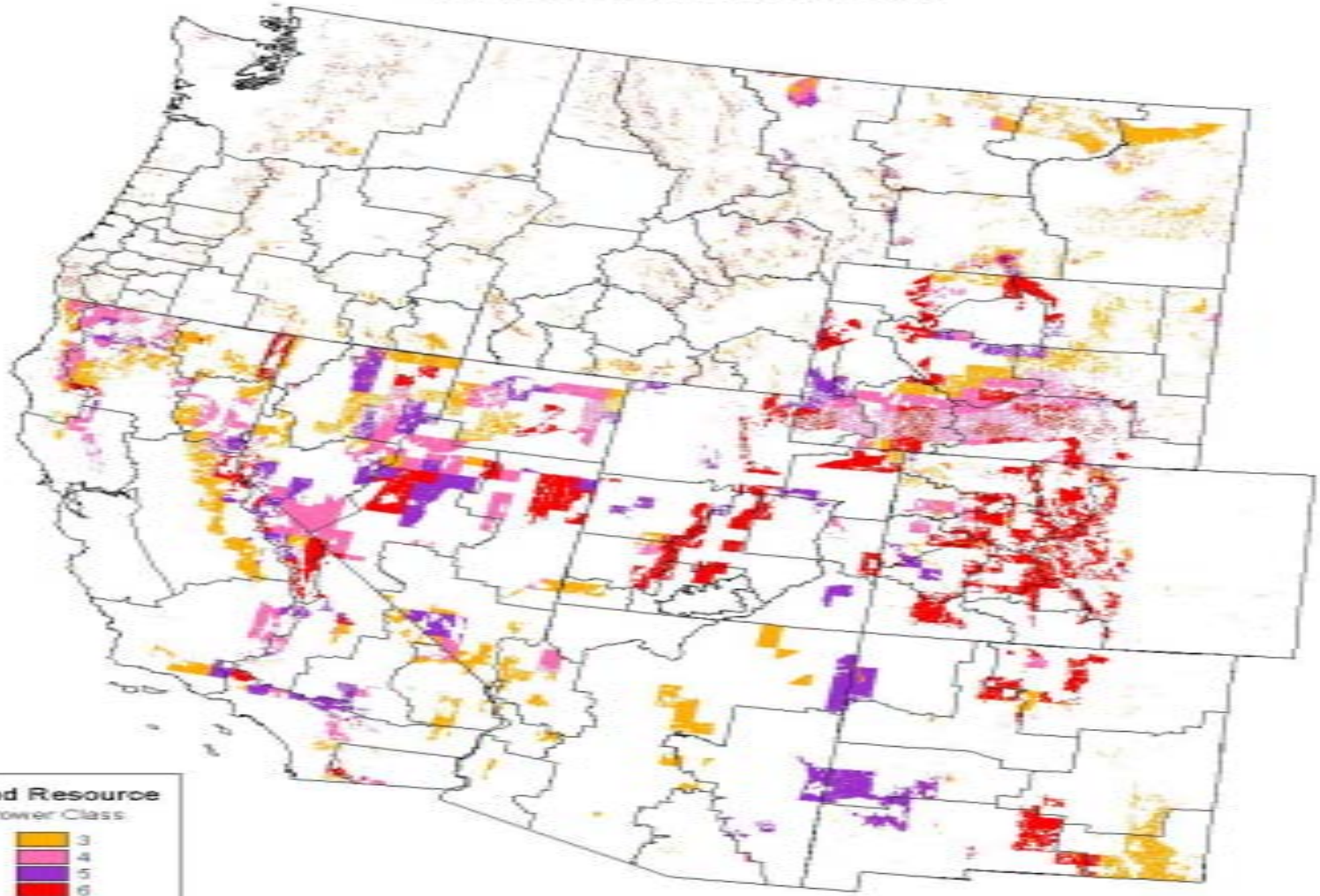
- GIS
- Screening
- Top picks for CSP, PV, wind, biomass, geothermal

Study Results

- 63 Planning Units – high potential for 1 or more renewable energy resources
- 20 Planning Units – high potential for 3 or more

NREL/BLM Renewable Resource Assessment Project

DOI Bureau of Indian Affairs, BLM, and USDA Forest Service Lands: Wind Resource Analysis Results



The lands shown meet the following criteria:

1) Wind resource >= power class 3
2) Within 25 miles of transmission 69-345 kv
3) Within 50 miles of major road
4) DOI Bureau of Indian Affairs, BLM or USDA Forest Service owned lands
5) BLM and USDA Forest Service compatible land use

U.S. Department of the Interior
Bureau of Land Management

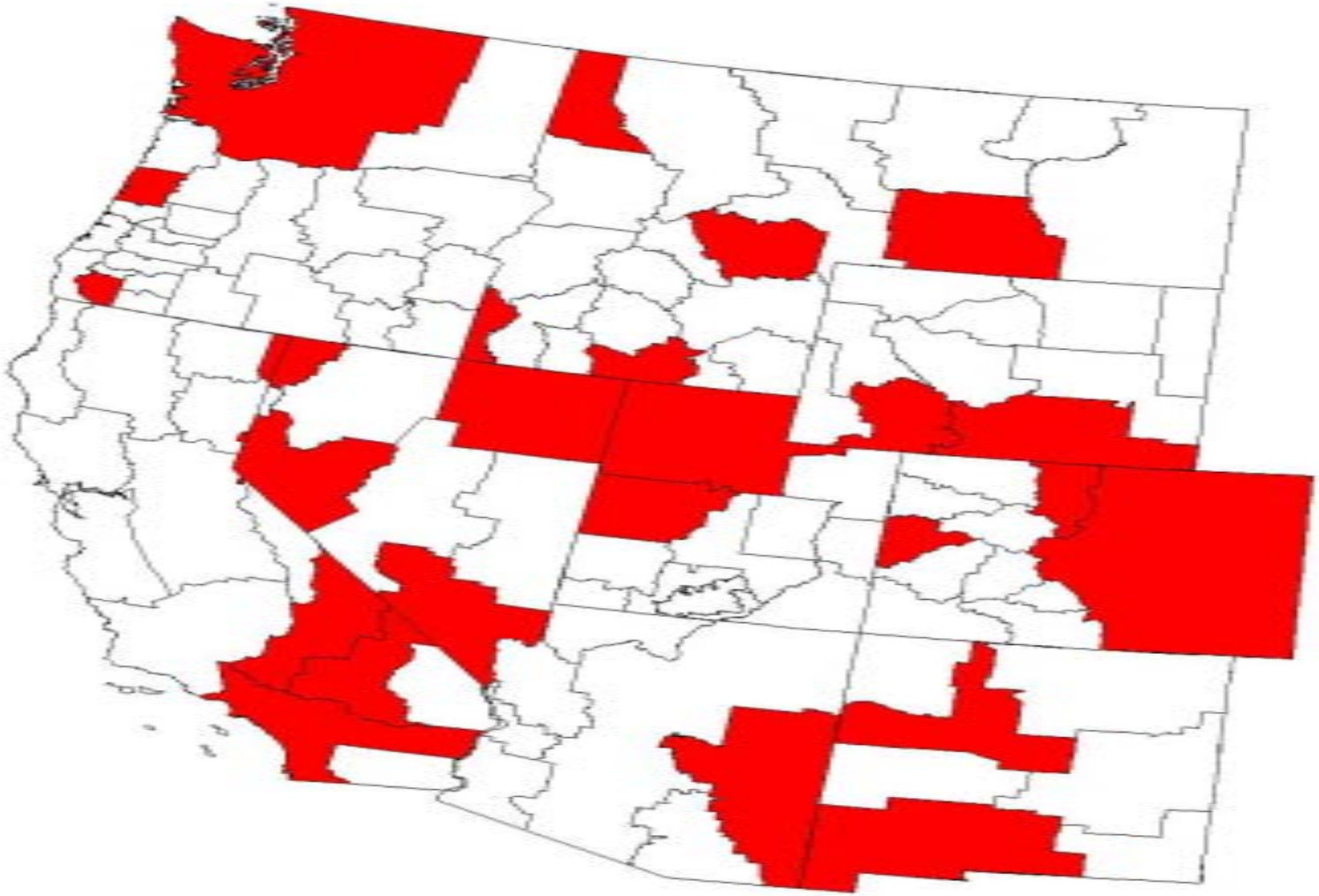
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

12-APR-2002 13:39

Wind: NREL/BLM Renewable Resource Assessment Project

25 Highest Potential Planning Units



U.S. Department of the Interior
Bureau of Land Management

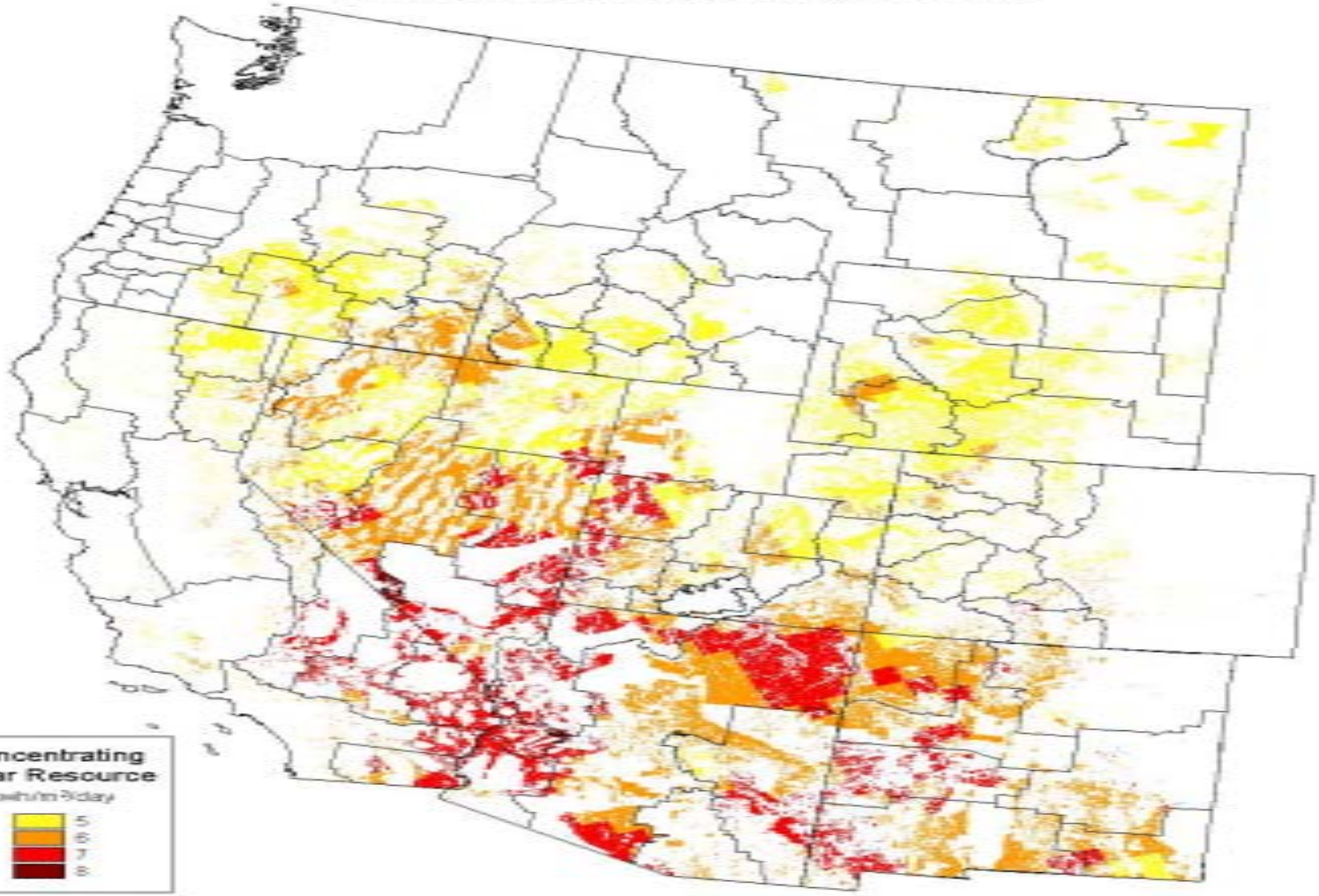
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

01-MAY-2002 1:3.8

NREL/BLM Renewable Resource Assessment Project

DOI Bureau of Indian Affairs, BLM and USDA Forest Service Lands: Concentrating Solar Power Analysis Results



The lands shown meet the following criteria:

1) Minimum direct solar resource of 5 kwh/m²/day
2) Terrain slope <= 5%
3) Within 50 miles of transmission 115-345 kv
4) Within 50 miles of major road or railroad
5) Minimum parcel size of 40 acres (continuous)
6) DOI Bureau of Indian Affairs, BLM or USDA Forest Service owned lands
7) BLM and USDA Forest Service compatible land use

U.S. Department of the Interior
Bureau of Land Management

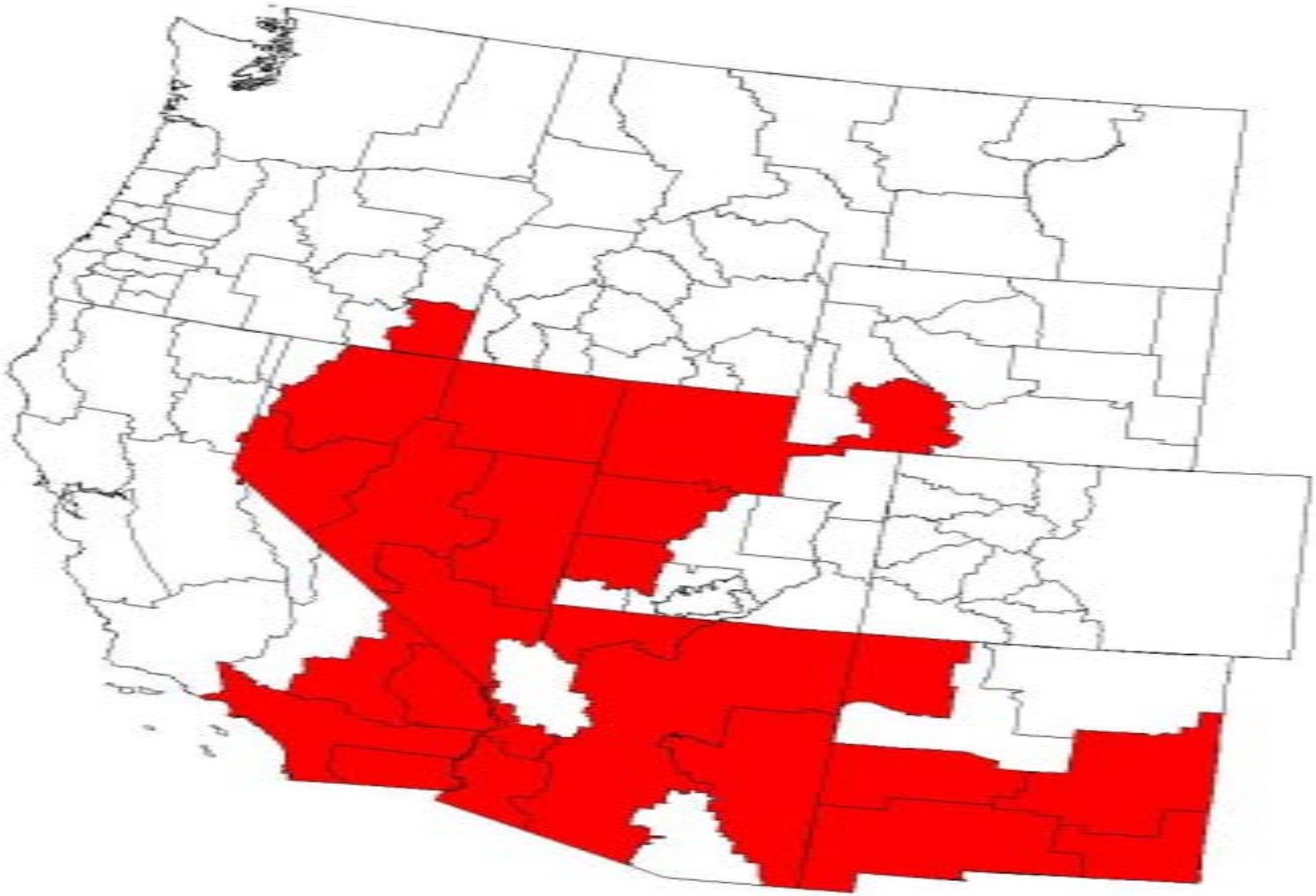
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

12-APR-2002 12:14

CSP: NREL/BLM Renewable Resource Assessment Project

25 Highest Potential Planning Units



U.S. Department of the Interior
Bureau of Land Management

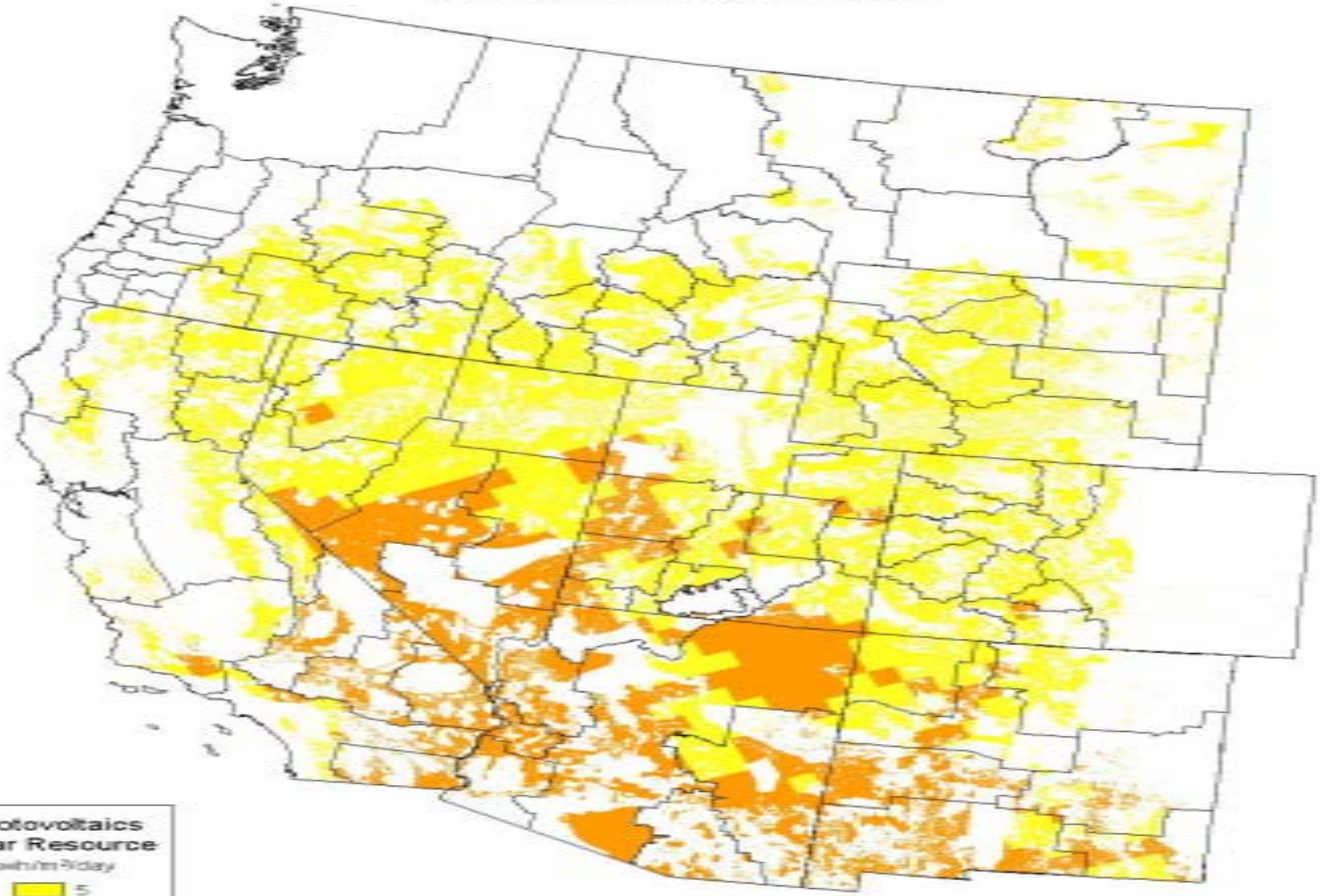
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

12-APR-2002 1:2.8

PV: NREL/BLM Renewable Resource Assessment Project

DOI Bureau of Indian Affairs, BLM and USDA Forest Service Lands: Photovoltaics Analysis Results



The lands shown meet the following criteria:

1) Minimum tilt=latitude solar resource of 5 kwh/m²/day
2) Within 50 miles of transmission 115-345 kv
3) DOI Bureau of Indian Affairs, BLM or USDA Forest Service owned lands
4) BLM and USDA Forest Service compatible land use

U.S. Department of the Interior
Bureau of Land Management

U.S. Department of Energy
National Renewable Energy Laboratory

NREL

12-APR-2002 1:4.7

PV: NREL/BLM Renewable Resource Assessment Project

25 Highest Potential Planning Units

U.S. Department of the Interior
Bureau of Land Management

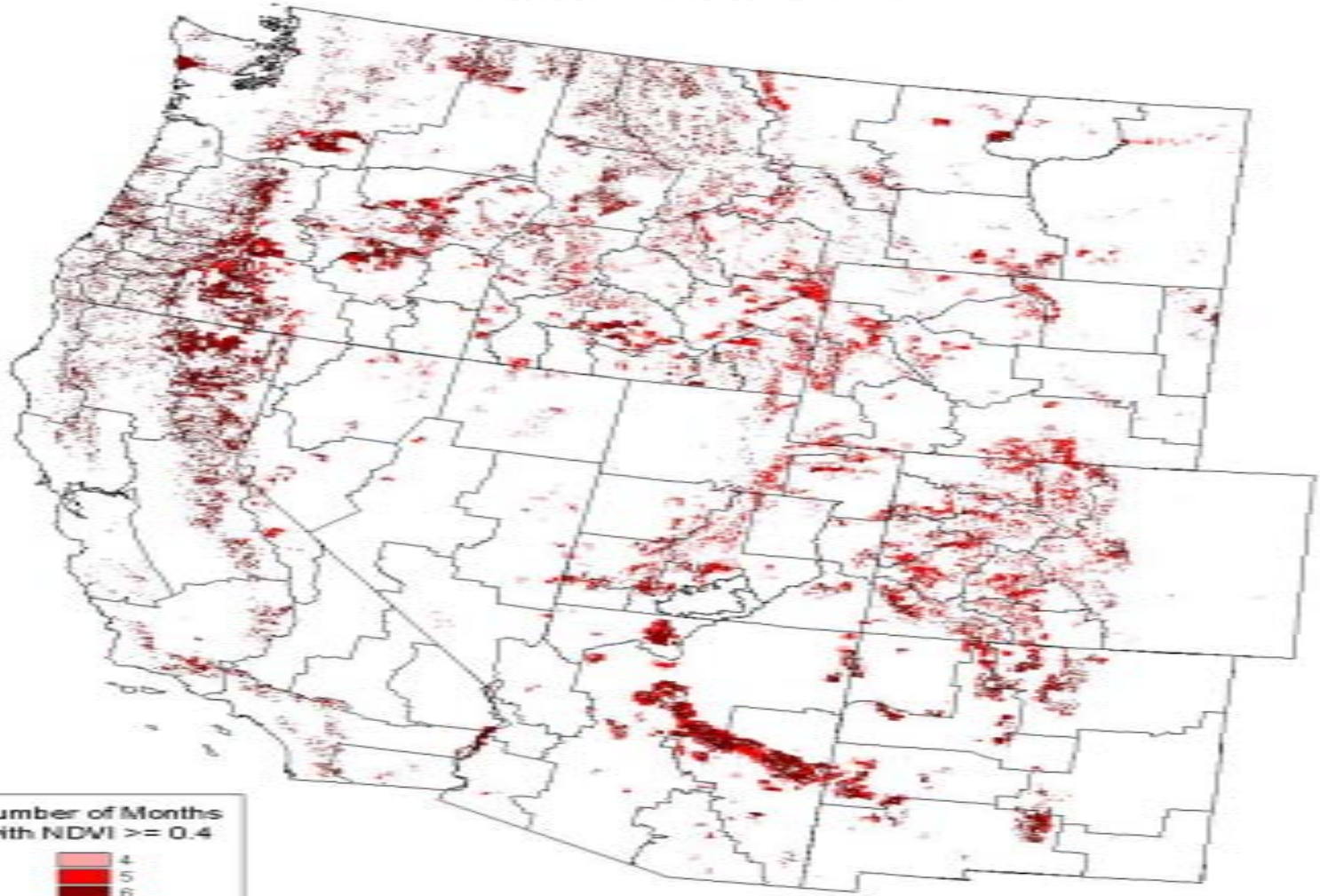
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

12-APR-2002 14:5

Biomass: NREL/BLM Renewable Resource Assessment Project

DOI Bureau of Indian Affairs, BLM and USDA Forest Service Lands: Biomass Analysis Results



The lands shown meet the following criteria:

1) NDVI >= 0.4 at least 4 months between April and September 2000
2) Terrain slope <= 12%
3) Within 50 miles of town of 100 people
4) BOI Bureau of Indian Affairs, BLM or USDA Forest Service owned lands
5) BLM and USDA Forest Service compatible land use

U.S. Department of the Interior
Bureau of Land Management

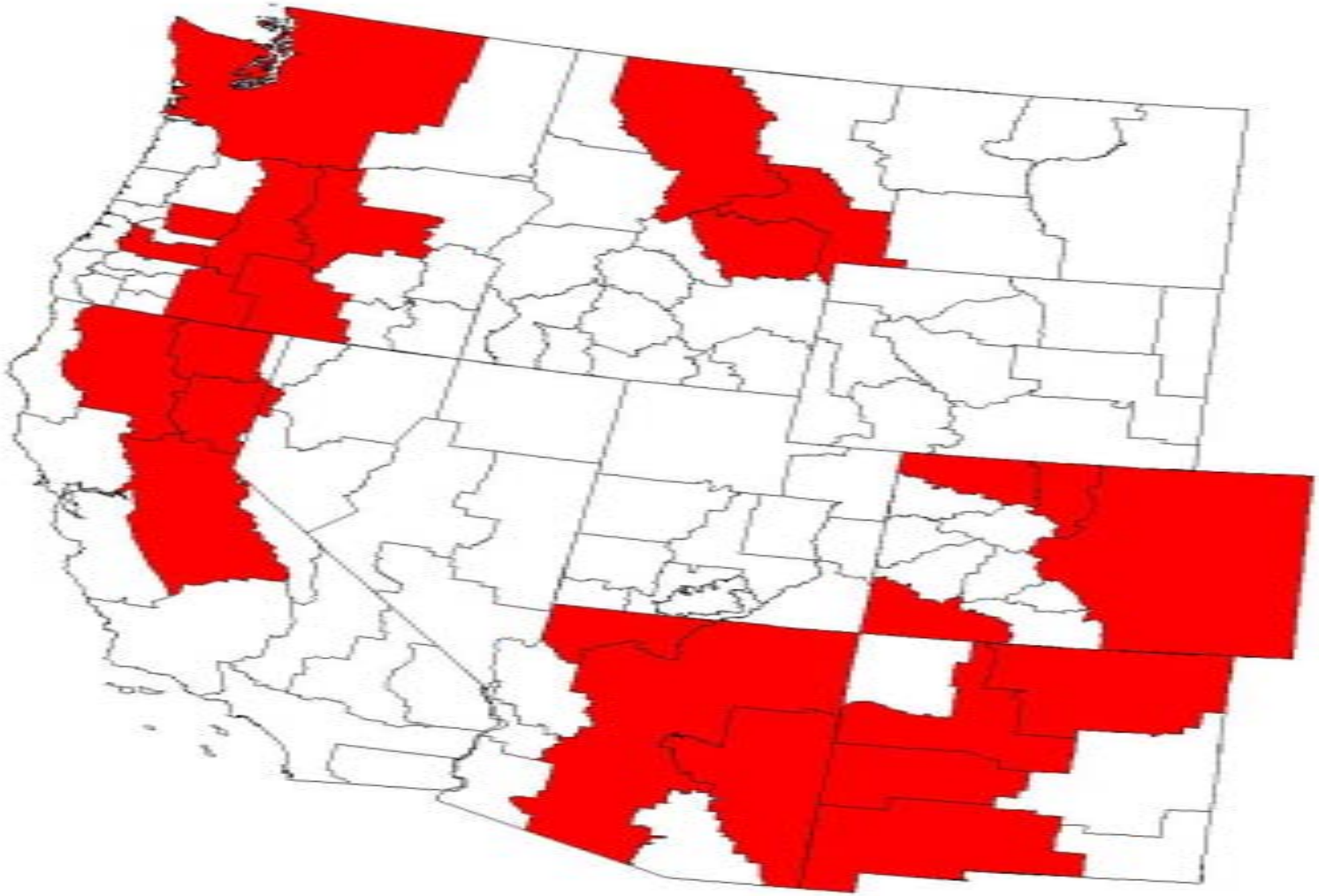
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

12-AFR-2800 1.6.11

Biomass: NREL/BLM Renewable Resource Assessment Project

25 Highest Potential Planning Units



U.S. Department of the Interior
Bureau of Land Management

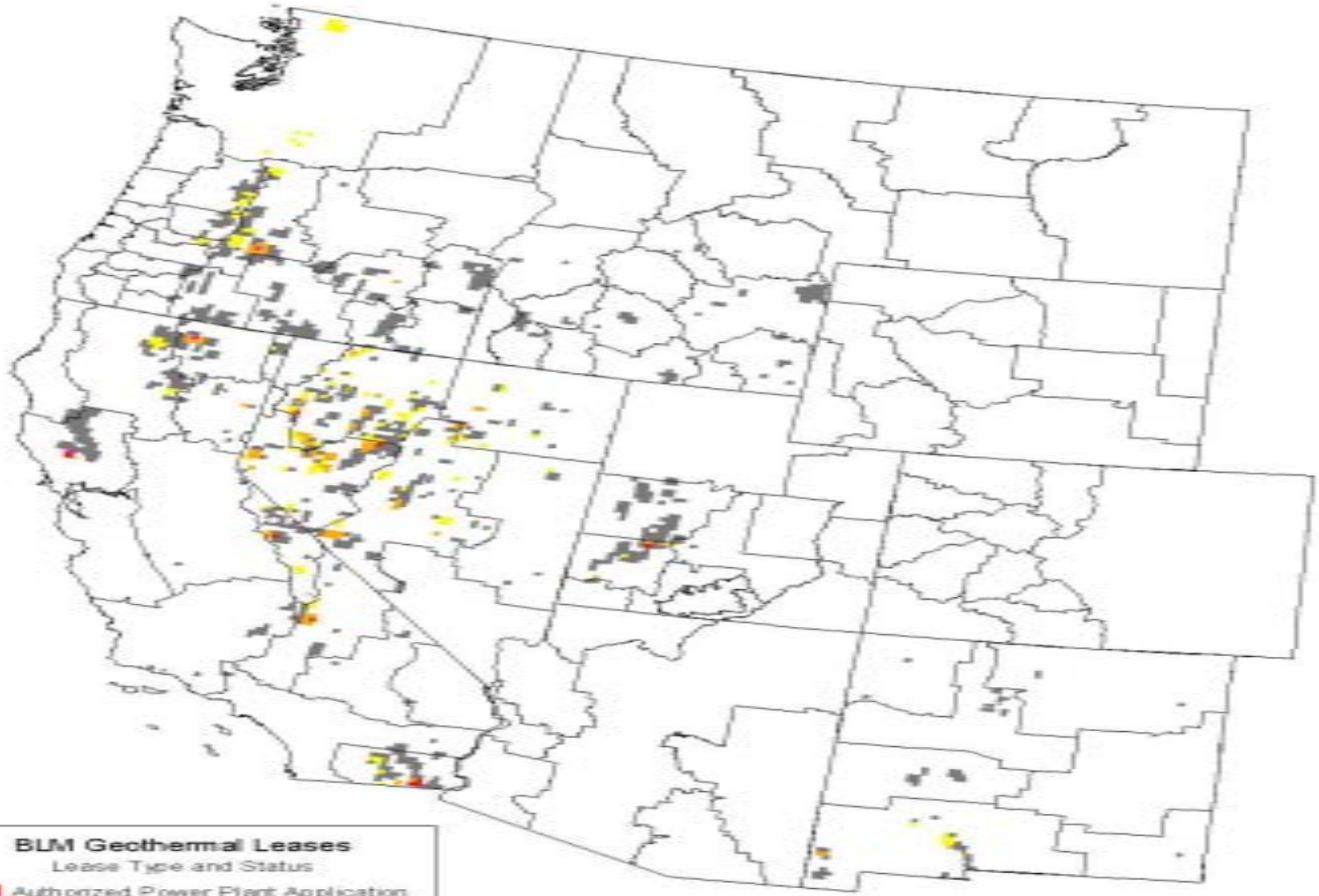
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

12-APR-2002 15:18

Geothermal: NREL/BLM Renewable Resource Assessment Project

BLM Geothermal Lease Information (CA, ID, NM, NV, OR, UT and WA)



BLM Geothermal Leases

Lease Type and Status

- Authorized Power Plant Application
- Pending Power Plant Application
- Authorized Lease
- Pending Lease
- Expired Lease

This data is shown to the Township/Range level. The actual lease or application may occur in only a small portion of the area shown. When multiple lease types or status occur in the same parcel, only the 'highest' potential application is shown.

U.S. Department of the Interior
Bureau of Land Management

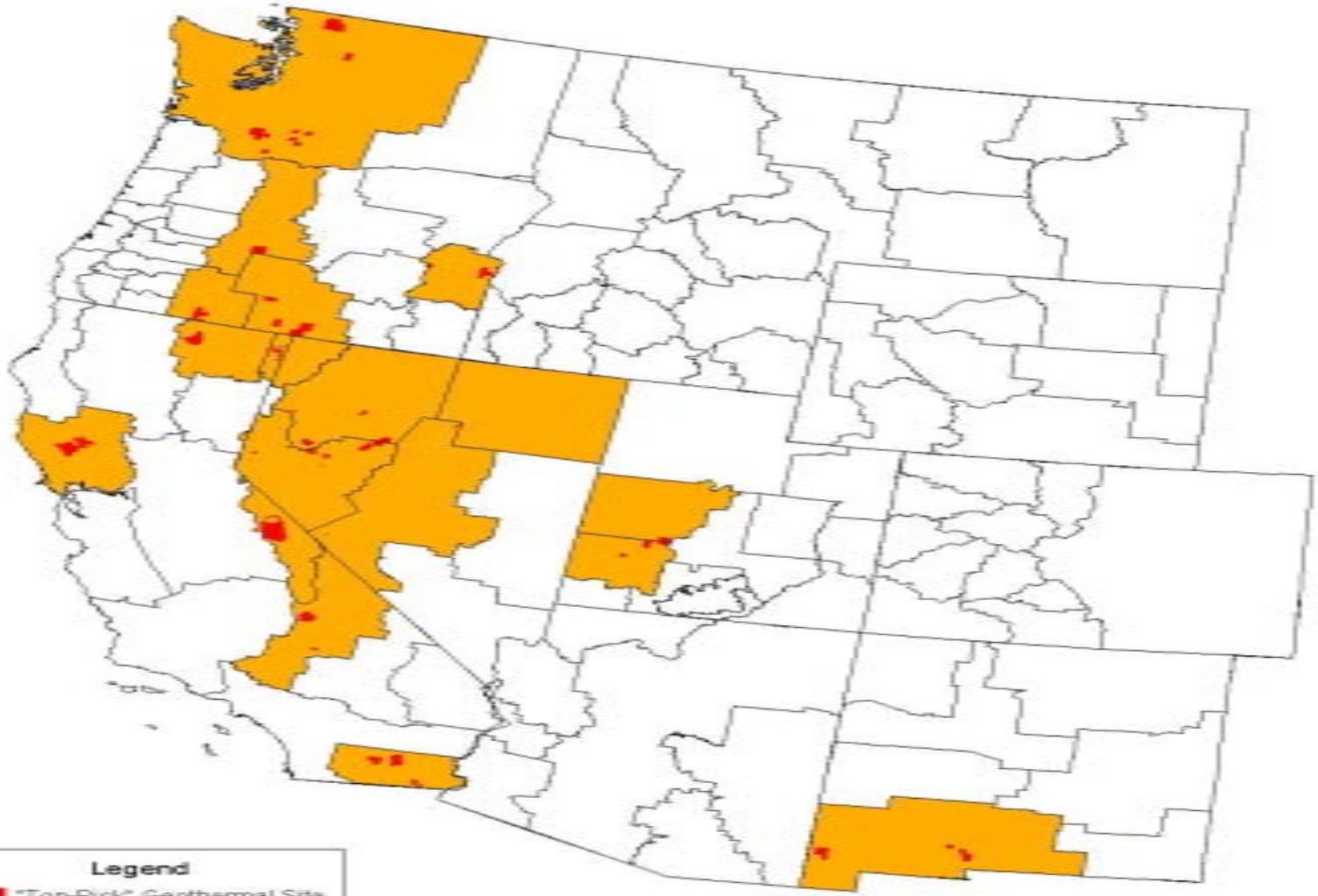
U.S. Department of Energy
National Renewable Energy Laboratory

NREL

08-JUL-2002 1.5.4

Geothermal: NREL/BLM Renewable Resource Assessment Project

BLM Planning Units with "Top-Pick" Geothermal Sites



U.S. Department of the Interior
Bureau of Land Management

U.S. Department of Energy
National Renewable Energy Laboratory

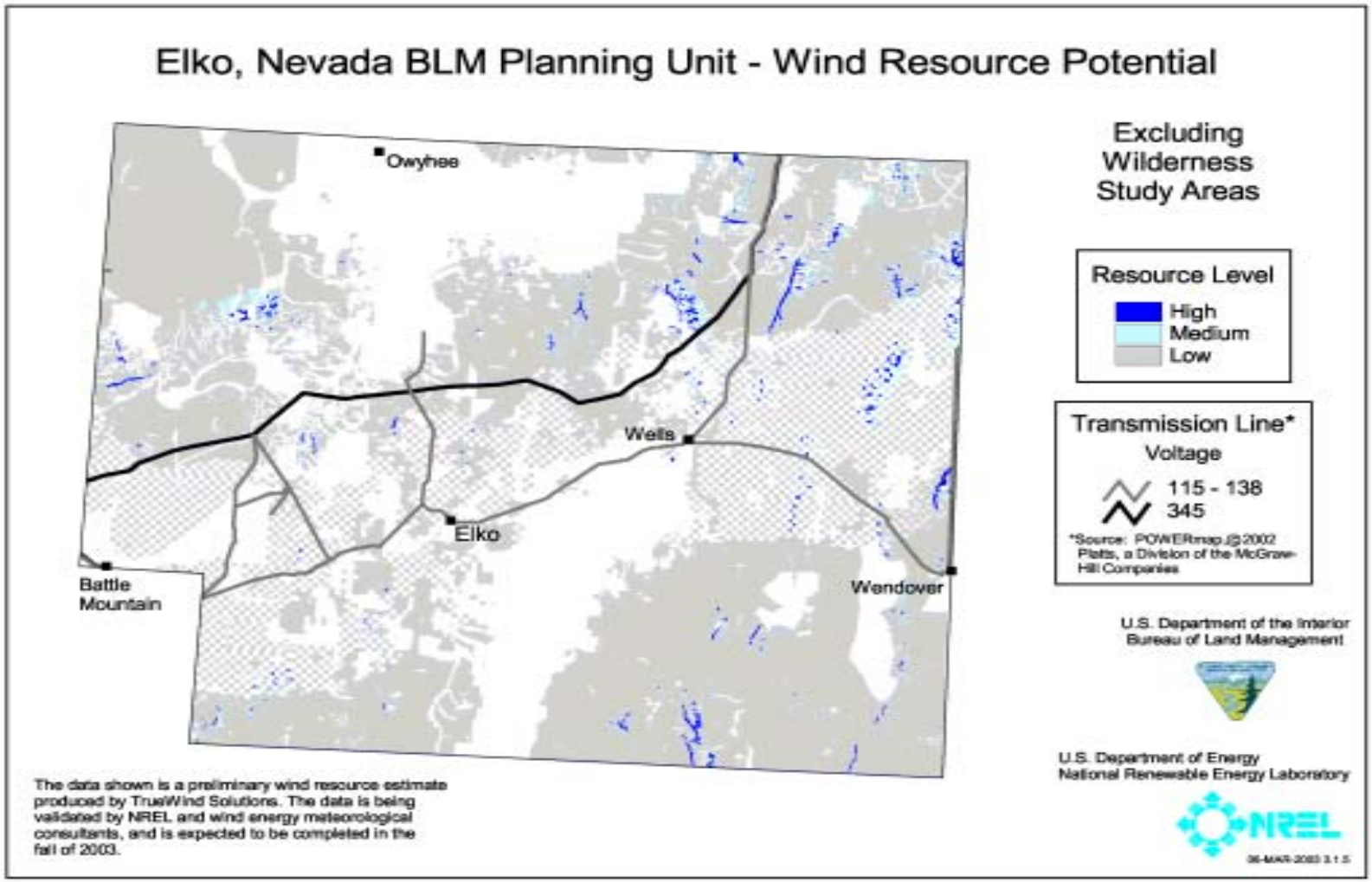
NREL

08-JUL-2002 1.5.2

Report Available

- **http://www.blm.gov/nhp/what/lands/realty/wind_energy.htm**
- **www.nrel.gov/docs/fy03osti/33530.pdf**

Next Generation



Results

Over 70 Wind Energy Applications Received by BLM Offices in Nevada, Arizona, New Mexico, Idaho, Utah, California, Wyoming, Oregon, Montana

Types of Authorizations
(Rights-of-Way)

- Site-Specific Testing and Monitoring Facilities
- Testing and Monitoring of a Project Area
- Wind Energy Development

General Provisions

- All applications subject to cost recovery
- Processing of applications identified as high priority
- Site testing and monitoring processed within 30 days

Site-Specific Testing and Monitoring Authorization

- Small site-specific met towers
- $50 per year rental fee for each tower
- Term limited to 3 years

Testing and Monitoring of Project Area

- Retains an interest in larger project area
- $1 per acre per year ($1,000 minimum) rental
- Term can be extended beyond 3 years
- Holder must submit a separate Plan of Development (POD) and application for future development

Wind Energy Development

- Includes turbines, access roads, electrical and support facilities
- Bond required
- Minimum rent ($2,365 per megawatt per year)
- Production rent (production royalty above minimum rent)
- Term generally in range of 30-35 years

Competitive Interests

- Applications Processed on a First-Come Basis
- Competitive Procedures
  - Land use plan identifies area for competitive leasing
  - Two applicants with Power Purchase Agreements

Due Diligence

- Limited 3 year term for site testing and monitoring
- Plan of Development required
- 12 months to install monitoring facilities (site testing and monitoring authorization)
- 2 years to construct production facilities (development authorization)
- Required annual rental payments

Environmental Review

- Testing and Monitoring applications limited to scope of testing only
- Development application requires broader NEPA analysis compliance with:
  - Endangered Species Act
  - Migratory Bird Treaty Act
  - National Historic Preservation Act
  - Other appropriate Laws
- Programmatic EIS to streamline future review process

Contacts & Information

- **Program Support**
  - **Lee Otteni – BLM Farmington, NM**
- **Renewable Energy Resource Assessment**
  - **Mike Kirby – BLM Denver**
- **Policy Oversight**
  - **Ray Brady – BLM Washington Office**
  - **Rick Stamm – BLM Washington Office**
- **Web site information**
  - **http://www.blm.gov/nhp/what/lands/realty/index.html**